

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing Of Claims:

1. (Currently amended) A high volume, wall-mountable air sanitation apparatus for removing contaminants ~~such as pollutants, organisms and odors~~ from air with high energy UV light and ozone, comprising:

a casing with an interior, a first side and a second side;

means for moving air located at the first side of the casing, the air moving across at least one target comprising a target compound, said target compound comprised of titanium dioxide, in combination with at least one selected from the group consisting of up to about 30% by weight copper and up to about 30% by weight silver; and

an elongated high energy UV light source adapted to direct UV light toward the air and the target, whereby the UV light striking the air and the target in the presence of water will generate at least one oxidant selected from the group consisting of hydro-peroxides, super-oxide ions and hydroxyl radicals.

2. (Cancelled)

3. (Previously presented) The apparatus of claim 1, wherein the target compound is up to about 30% by weight titanium dioxide, and further comprises a hydration compound of silica gel.

4. (Original) The apparatus of claim 1, wherein the target comprises a mesh at least partially located between the UV light source and the air.

5. (Previously presented) The apparatus of claim 1, wherein the elongated high energy UV light source emits UV light at a wavelength of approximately 185 nm to 254 nm.

6. (Previously presented) The apparatus of claim 4, wherein the target further comprises a secondary element located a predetermined distance from the mesh, whereby at least a portion of the UV light coming through the mesh strikes the secondary element.

7. (Previously presented) The apparatus of claim 6, wherein the secondary element comprises a secondary target compound comprised of titanium dioxide, in combination with at least one selected from the group consisting of up to about 30% by weight copper and up to about 30% by weight silver.

8. (Original) The apparatus of claim 1, wherein the means for moving air comprises a fan located in the interior of the casing.

9. (Previously presented) The apparatus of claim 1, further comprising at least a first particulate filter operatively associated with the casing for removing particulates from the air before the air is moved over the target compound.

10. (Previously presented) The apparatus of claim 8, wherein UV light may be visible from an exterior of the casing, whereby a person may observe whether the UV light source within the apparatus is operating.

11. (Previously presented) The apparatus of claim 1, wherein the UV light source comprises at least one low-pressure mercury UV light.

12. (Previously presented) The apparatus of claim 11, comprising at least one mesh target disposed to surround each low-pressure mercury UV light.

13. (Previously presented) The apparatus of claim 12, wherein each of the at least one mesh target may be affected by more than one UV light source.

14. (Currently amended) An apparatus for efficiently removing contaminants ~~such as pollutants, organisms and odors~~ from air with high energy UV light, comprising:

a high energy UV light source capable of generating ozone from oxygen in air;

a mesh target located between the high energy UV light source and the air to be treated, the mesh target including a target compound, said target compound comprised of titanium dioxide, in combination with at least one selected from the group consisting of up to about 30% by weight copper and up to about 30% by weight silver, wherein UV light and the target compound generate in the presence of water at least one oxidant selected from the group consisting of hydro-peroxides, super-oxide ions and hydroxyl radicals; and

a secondary target element located a predetermined distance from the mesh target, the secondary target element including a secondary target compound, said secondary target compound comprised of titanium dioxide, in combination with at least one selected from the group consisting of up to about 30% by weight copper and up to about 30% by weight silver, wherein at least a portion of the UV light that passes through the mesh target strikes the secondary target element, thereby generating an additional oxidant selected from the group consisting of hydro-peroxides, super-oxide ions and hydroxyl radicals.

15. (Previously presented) The apparatus of claim 14, wherein the air generally flows between the mesh target and the secondary target element.

16. (Previously presented) The apparatus of claim 14, wherein the secondary target element acts as a conduit for the air.

17. (Original) The apparatus of claim 15, wherein the target compound further comprises a hydration compound of silica gel.

18. (Previously presented) The apparatus of claim 14, wherein the high energy UV light source comprises at least one low-pressure mercury UV light.

19. (Previously presented) A wall mountable method for treating a large volume of air, comprising:

directing the large volume of air toward a target, said target comprising a target compound, said target compound comprised of titanium dioxide, in combination with at least one selected from the group consisting of copper and silver; and

directing UV light toward the target, said UV light being at a wavelength sufficient to generate ozone from oxygen in the air and being sufficient to generate at least one oxidant selected from the group consisting of hydro-peroxides, super-oxide ions and hydroxyl radicals from interaction with the compound in the presence of water.

20. (Original) The method of claim 19, wherein the target comprises a mesh located generally between the air and the UV light.

21. (Previously presented) The method of claim 20, wherein the target further comprises a secondary element located a predetermined distance from the mesh, whereby the air generally passes between the mesh and the secondary element and UV light passing through the mesh strikes the secondary element in the presence of water, thereby generating an additional oxidant selected from the group consisting of hydro-peroxides, super-oxide ions and hydroxyl radicals.

22. (Previously presented) A wall mountable method for treating air, comprising:

directing the air toward a target comprising a target compound, said target compound comprised of titanium dioxide, in combination with at least one selected from the group consisting of up to about 30% by weight silver and up to about 30% by weight copper;

directing UV light toward the target, said UV light being at a wavelength sufficient to generate ozone from oxygen in air and to generate at least one oxidant selected from the group consisting of hydro-peroxides, super-oxide ions and hydroxyl radicals from interaction with the compound in the presence of water.